

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
73544 Hwy 64
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-110-2006-191-EA

PROJECT NAME: Wray Gulch Erosion Control Structures

LEGAL DESCRIPTION:

Township	Range	Section(s)/Lots or Portions Of
2N	97W	23, 25, 26, 27, 36

APPLICANT: Rio Blanco Water Conservancy District

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: A partnership between the Bureau of Land Management (BLM), Rio Blanco Water Conservancy District, and various BLM grazing permittees has been created to provide a working mechanism to assist in the reduction of sediment/salt loads and erosion rates of highly erosive drainages within the White River Watershed. The partnership has implemented this project in other localities in the past with the BLM completing an Environmental Assessment (EA) and required clearances for each individual project area. See below for previous EA numbers as a reference.

- CO-110-2005-183-EA
- CO-110-2004-141-EA
- CO-WRFO-03-136-EA
- CO-WRFO-02-98-EA
- CO-WRFO-01-187-EA

This partnership has aided in the BLM effort of conducting the Red Wash/Wolf Creek cheatgrass restoration project this fall. Thereby, rehabilitating cheatgrass dominated rangelands in the Red Wash watershed to a desired perennial plant cover.

Proposed Action: The BLM and the applicants have identified 67 sediment retention structures for construction and/or reconstruction within the Wray Gulch watershed, which is an immediate drainage of the White River. Of these 67 structures, 51 are existing livestock/erosion earthen reservoirs that would be cleaned of sediment accumulation and the remaining 16 structures would be new construction. Refer to attached Figure 1 (map) and Table 1 for the location and

description of these structures. Construction will include use of a dozer to build varying sizes of earthen dams, dependent upon the requirements of the locality, which will function as sediment catchments and small water impoundments, and will have appropriate spillways to dissipate surplus water. These structures will only catch overland flow events from rain and snow melt, as no perennial water exists within the project's boundary. Proposed construction would be authorized from September through November of 2006, or as time and weather allows.

The approximate maximum combined surface disturbance associated with the construction of the new structures (16 sites) would be less than 1.6 acres at approximately 0.10 acres per site. Reconstruction and removal of sediment out of the existing 51 erosion control structures would result in a re-disturbance of approximately 8.5 acres.

All dams would be small in nature, with a surface area not exceeding 50 feet by 50 feet and an embankment height not exceeding 10 feet with 4 feet of freeboard above the storage pool. Average pool depth would be 5 to 6 feet with about half the pool depth below the existing grade of the drainage.

Most of these sites have been located in small secondary tributaries at or just below advancing headcuts. All structures have been located in the upper ends of these small watersheds to prevent failure and sequential erosion of the dams and adjoining tributaries during high runoff events.

A core trench would be excavated across the drainage before embankment construction to aid in compaction and to prevent water piping under the embankment. Each site would have a spillway constructed at least seven feet wide to minimize concentration of overflowing water. The spillway at each site would be located and designed to the maximum extent possible to discharge water onto grassy flats that would aid in reducing the energy of flowing water from the spillways and increase water infiltration into the soil through irrigation.

Topsoil and herbaceous vegetation from each site would be stockpiled for re-use to be placed in the spillway and across the embankment top and face above the pool level after completion of the structure. This re-used stockpile will provide for an effective seedbed for reclamation. Any excess topsoil would be placed on the backside of the embankment. All disturbed areas, including topsoil re-placement areas, would be seeded immediately following completion of each dam. The BLM will supply necessary seed for reclamation, and the applicant's contractor will distribute seed before leaving each site. Timely seeding will reduce potential soil erosion and lessen the ability of undesirable plant species to establish. To achieve this task, the seed mix will consist of 60% western wheatgrass, 30% crested wheatgrass, 5% Indian ricegrass, and 5% cicer's milkvetch.

All costs for construction and future maintenance of these erosion control dams, except for expenditures relating to the necessary federal approvals, NEPA analysis, and seed mix would be the responsibility of the applicants. It is estimated that the life expectancy of these structures would range from 10 to 20 years before any maintenance work would be required.

No road construction or general dozing would be required or allowed to access any dam site. However, cross-country travel by a dozer, with the blade up, would be necessary to access

approximately 15 sites. The remainder proposed structures, are accessible from adjacent and existing roads ranging from 2-tracks to oil & gas maintained roads. As shown from previous cross-country dozer travel within similar localities associated with the project from previous year, there are little long-term impacts or evidence of the previous dozer track imprints. There are several old roads/trails that have been identified in the project area and will be used to the maximum extent possible to access the dam sites. See attached figure 1 (map) for various roads in relation to the proposed dozer routes.

No Action Alternative: Under the no-action alternative, no erosion control dams would be built.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: The Rio Blanco Water Conservancy District considered dredging sediment from the reservoir and building a smaller dam on the White River upstream of Kenney Reservoir to serve as a sedimentation trap as alternatives to achieve their objectives. However, the cost of either of these alternatives was above the District's capabilities. Therefore neither of these alternatives will be analyzed in detail in this environmental assessment.

NEED FOR THE ACTION: Kenney Reservoir is located on the White River and serves as the municipal water storage and supply for the town of Rangely, Colorado. The reservoir was constructed in 1983, and since that time the storage capacity of the reservoir has been reduced by 36 percent from sediment loads entering the reservoir. At the current sedimentation rate of 315 acre-feet per year, the water storage capacity of the reservoir will be completely lost in less than 27 years.

The Rio Blanco Water Conservancy District operates the reservoir and associated power generation plant, and they have completed several engineering studies on the most effective and economical methods to extend the life of the reservoir. The most effective method in relation with costs is to retain sediment loads in the watersheds tributary of the White River. The Water District, through a grant from the Colorado Water Conservancy Board, identified and mapped the watersheds producing the greatest sediment loads entering the White River. The Rio Blanco Water Conservancy District has initiated a partnership with local landowners and others to concentrate their efforts in those high sediment-producing watersheds.

Public lands make up nearly 90 percent of the ownership of the high sediment producing watersheds. At least an equal percentage of the management actions and treatment projects needed to extend the life of the reservoir would occur on public land.

The proposed action is to construct 16 erosion control structures and clean sediment out of 50 existing earthen dams. Sediment dams were identified as recommended treatment methods in similar watersheds such as the Lower Wolf Creek Watershed Management Plan (WMP) and Red Wash WMP to help achieve both plans' objectives. Those objectives include reduction of salt loads within the Colorado River System by retaining high saline soils within the upper watersheds. A significant portion of the project area occurs within the Alkaline Slope Ecological Site, which are similar to those identified as Treatment Area 1 in the WMP. Treatment Area 1 has the highest ranking for applying recommended treatment methods and greatest potential for decreasing salt contribution into off site stream systems.

Sediment production from the project area is estimated at 5 to 12 tons per acre per year with some areas producing as much as 20 tons per acre per year. It is estimated that the proposed erosion control structures dams would retain sediments produced from 850 acres. This would result in an estimated 4,250 to 10,200 tons of sediment retained in the uplands annually and not transported into the tributaries of the White River and eventually into Kenny Reservoir. In addition, the salt content within the sediment loads would be retained in the uplands and not transported into the White River and eventually the Colorado River System.

Without the erosion control structures, up to 10,200 tons of sediment would continue to be transported annually into the White River waterways leading to Kenny Reservoir. Also, the project area would continue to produce salt loads that would eventually make their way into the Colorado River system.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3): The action conforms to the decisions/pages of the plan listed below.

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: 2-2, 2-3, and 2-23

Decision Language:

Page 2-2: "Identify treatments for fragile watershed acres that are contributing to water quality problems (accelerated erosion and salt contributions) in the Colorado River Basin."

Page 2-3: "Design projects that will maintain or improve the condition of fragile watersheds identified as contributors of sediment and salinity to the Colorado River system."

Page 2-23: "Identification of range improvements to enhance rangeland productivity and management."

**AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES /
MITIGATION MEASURES:**

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health

and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

CRITICAL ELEMENTS

AIR QUALITY

Affected Environment: The entire White River Resource area has been classified as either attainment or unclassified for all pollutants, and most of the area has been designated prevention of significant deterioration (PSD) class II. The proposed action is not located within a ten mile radius of any special designation air sheds or non-attainment areas. The air quality criteria pollutant likely to be most affected by the proposed actions is the level of inhalable particulate matter, specifically particles ten microns or less in diameter (PM₁₀) associated with fugitive dust. No air quality monitoring data is available for the survey area. However, it is apparent that current air quality near the proposed location is good because only one location on the western slope (Grand Junction, CO) is monitoring for criteria pollutants other than PM₁₀. Furthermore, the Colorado Air Pollution Control Division (APCD) estimates the maximum PM₁₀ levels (24-hour average) in rural portions of western Colorado to be near 50 micrograms per cubic meter (µg/m³). This estimate is well below the National Ambient Air Quality Standard (NAAQS) for PM₁₀ (24-hour average) of 150 µg/m³.

Environmental Consequences of the Proposed Action: The proposed action may result in short term impacts to local air quality during and after construction, due to dust being blown into the air. However, airborne particulate matter should not exceed Colorado air quality standards on an hourly or daily basis. Following successful seeding of the sites, airborne particulate matter should return to near pre-construction levels.

Environmental Consequences of the No Action Alternative: None

Mitigation: To minimize production of fugitive particulate matter (fugitive dust) from associated access roads, vehicle speeds must not exceed 15 mph *or* dust plume must not be visible at appropriate designated speeds for road design. Earth moving or excavation activities will be suspended when wind speeds exceed a sustained velocity of 20 miles per hour. The top and downstream portions of retention structures will be revegetated with a BLM approved seed mixture.

CULTURAL RESOURCES:

Affected Environment: The proposed new pond locations have been inventoried at the Class III (100% pedestrian) level (Selle in preparation) with one cultural resource and one isolated find identified in the proposed pond areas.

The cultural resource appears to be part of an erosion control dam constructed by the CCC during the Depression and as such might meet NRHP eligibility criteria. Repair of a portion of the dam where it has piped out may be possible if the remaining portions of the historic work can be avoided. Otherwise further research will be necessary to determine NRHP eligibility and any mitigation measures that might be necessary before construction begins.

Clean out of the pond above the historic structure will not impact the historic structure and can be permitted to proceed.

Environmental Consequences of the Proposed Action: The proposed action might have the potential to impact a cultural resource that might be eligible for nomination to or inclusion on the NRHP. Further research is necessary before construction at the site is allowed to proceed.

Environmental Consequences of the No Action Alternative: There would be no impacts to cultural resources under the No Action Alternative.

Mitigation: 1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places;
- the mitigation measures the operator will likely have to undertake before the identified area can be used for grazing activities again and,

Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

2. Clean out and repair of the historic structure may not proceed until all relevant research and consultation with the Colorado SHPO and any required mitigation has been completed.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The project area is a salt desert shrub and sagebrush ecotypes. Soils are generally deep clay, loamy, alkaline, and highly erosive in nature. Associated ecological sites of the proposal include Rolling Loam, Clayey Slopes, and Clayey Foothills.

Cheatgrass and Japanese brome, non-native invasive grasses, are located throughout the locality of the proposed action. Cheatgrass forms a dominate role within a portion of the landscape associated with the proposal, while Japanese brome is sub-dominant and scattered in nature. Halogeton is an annual, undesirable, invasive, and non-native plant species that is present within

the locality of the proposed action. Cheatgrass, Japanese brome, and halogeton are plant species which are highly adapted to disturbed soils.

Tamarisks are an invasive, non-native species that is found in saturation zones and waterways across the western United States. Tamarisks are established within approximately 5 of the 51 existing check dams proposed for cleaning of excess sediment accumulation.

Scotch thistle is a listed noxious weed in the state of Colorado that is typically a biennial and robust (~8 ft.) plant species. A couple of plants are known to occur along the roadway's shoulder leading to the Rio Blanco County Landfill within the vicinity of the proposal. These scotch thistles were mechanically treated in 2005 and have not reappeared.

Environmental Consequences of the Proposed Action: The proposed seed mix would contain 30% crested wheatgrass, a non-native grass species. Crested wheatgrass is recommended because it is highly adapted to this site (heavy clay soils) and offers the greatest opportunity to establish vegetative cover. Limiting factors for successful reclamation of the site includes soils with a high clay content, low annual precipitation, drought prone, and cheatgrass establishment on the adjacent rangelands. This mitigated non-native species have demonstrated itself to have the greatest ability to establish, provide soil protection, and offer a competitive interaction against invasive, non-native species such as cheatgrass.

There is a potential for tamarisks to be transported by the equipment used in the cleaning of sediment associated with the 5 existing erosion control structures to other sites free of tamarisks; thereby, aiding in the potential spread of tamarisks across the drainage.

The action will not have any influence on the known occurrence of Scotch thistle. Its presence is connected to seed dispersal along Rio Blanco County Landfill road, and the proposal will not affect any soils along the immediate road shoulder where the plants have occurred.

Environmental Consequences of the No Action Alternative: There would be no impacts.

Mitigation: The 5 sites identified with tamarisk plants shall be cleaned last, therefore eliminating the potential spread of tamarisks seed to adjacent sites free of tamarisks.

MIGRATORY BIRDS

Affected Environment: A number of migratory birds fulfill nesting functions throughout the project area's low-elevation sagebrush and salt desert shrubland habitats from April through July. Those birds identified as having higher conservation interest (i.e., Rocky Mountain Bird Observatory, Partners in Flight program) include: horned lark, Brewer's sparrow and green-tailed towhee. These species are common and widely represented in extensive suitable habitats throughout the Resource Area.

Environmental Consequences of the Proposed Action: This project would be implemented during September through November, well outside the reproductive period of local

migratory birds. The individual construction sites are small and are centered on narrow incised channels that are not in positions, nor do they support vegetation, normally selected for nest sites. The proposed action would have no effective influence on the potential extent or quality of breeding bird habitat in the short term. In the long term, rejuvenated channel incises would contribute incrementally to improvements in soil stability and enhancement of herbaceous ground cover properties-characteristics offering improved cover and forage resources for nongame birds during the nesting season.

Environmental Consequences of the No Action Alternative: There would be no action authorized that could potentially influence migratory bird breeding activities or the character or their habitat.

Mitigation: None

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: There are no threatened, endangered or BLM-sensitive animal species that inhabit or derive important use from the project area.

Environmental Consequences of the Proposed Action: The proposed action would have no conceivable influence on special status animals or associated habitat.

Environmental Consequences of the No Action Alternative: The no action alternative would have no conceivable influence on special status animals or associated habitat.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: The proposed and no-action alternatives would have no influence on populations or habitats of animals associated with the Endangered Species Act or BLM sensitive species and, as such, would have no influence on the status of applicable land health standards.

THREATENED AND ENDANGERED PLANTS: (This includes all information related to plants in Public Land Health Standard 4.)

Affected Environment: One Colorado BLM sensitive plant species occurs near the project area, the debris milkvetch (*Astragalus detritalis*). The geologic substrates for the other special status plants known within the White River Field Office do not exist near the project area. The debris milkvetch occurs on some of the alluvial terraces that are within a mile wide corridor of Hwy 40 between Massadona to the west and Wolf Creek to the east. Nearly all of the known populations of the debris milkvetch occur immediately south of Hwy 40 on terraces and adjoining slopes covered with small cobbles. An inventory of the project area did not find any plants of the debris milkvetch nor any of its cobble covered habitat.

Impact of Proposed Action: No impacts are anticipated to any special status plant species from the proposed action.

Impact of No Action Alternative: No impacts are anticipated to any special status plant species from the no-action alternative.

Mitigative Measures: None

Finding on the Public Land Health Standard for Threatened & Endangered species: There is no reasonable likelihood that the proposed action or no action alternative would have an influence on the condition or function of Threatened, Endangered, or Sensitive plant species. Thus there would be no effect on achieving the land health standard.

WASTES, HAZARDOUS OR SOLID

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used and transported in a manner consistent with applicable laws, and the generation of hazardous wastes would not be anticipated. Solid wastes would be properly disposed of.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

Mitigation: The applicant shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: The proposed sediment control structures will be situated in three separate stream segments (12, 13a, and 9a) within the White River Basin. The majority of the proposed sediment retention structures (53) will be situated in stream segment 12. Segment 9a will have 11 structures while segment 13a will be affected by 3 structures. The following table (Table 2) outlines the affected stream segments, basic water quality information, and the number of structures impacting the segment.

Table 2:

Watershed	Stream Segment	Drainage Basin	Use Protected	Beneficial Use Classification	303(d) listed	M&E listed
White River	12	White River	N/A	Warm aquatic life 1, Recreation 1a, Water supply, and Agriculture	N/A	N/A
Little Tom Draw	13a		UP	Warm Aquatic Life 2, Recreation 2, and Agriculture		
Wray Gulch	9a			Cold Aquatic Life 2, Recreation 2, Water Supply, and Agriculture		

(CDPHE 2006b)

The “Status of Water Quality in Colorado –2006” (CDPHE 2006b) and Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin (CDPHE 2005a) were reviewed for information relating to drainages within the project area. Stream segment 9a of the White River Basin is defined as all tributaries to the White River, including all wetlands, from the confluence of the North and South Forks to a point immediately above the confluence with Piceance Creek, which are not within the boundary of national forest lands, except for the specific listings in segments 9b and 10b. The State has classified stream segment 9a of the White River Basin as “Use Protected” and further designated as beneficial for the following uses: Cold Aquatic Life 2, Recreation 2, Water Supply, and Agriculture. The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. Numeric standards for inorganic compounds and metals can be found within Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin (CDPHE 2005a).

Stream segment 12 of the White River Basin is defined as the mainstem of the White River from a point immediately above the confluence with Piceance Creek to a point immediately above the confluence with Douglas Creek including Taylor Draw Reservoir. Segment 12 has not been designated use-protected. An intermediate level of water quality protection applies to waters that have not been designated outstanding waters or use-protected waters. For these waters, no degradation is allowed unless deemed appropriate following an antidegradation review. The state has classified segment 15 as being beneficial for the following uses: Warm aquatic life 1, Recreation 1a, Water supply, and Agriculture (CDPHE 2005a).

Stream segment 13a includes all tributaries to the White River, including all wetlands, lakes and reservoirs from a point immediately above the confluence with Piceance Creek to a point immediately above the confluence with Douglas Creek. The State has classified stream segment 13a of the White River Basin as “Use Protected” and further designated as beneficial for the following uses: Warm Aquatic Life 2, Recreation 2, and Agriculture. The antidegradation review requirements in the Antidegradation Rule are not applicable to waters designated use-protected. For those waters, only the protection specified in each reach will apply. Numeric standards for inorganic compounds and metals can be found within Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin (CDPHE 2005a).

Newly promulgated Colorado Regulations Nos. 93 and 94 (CDPHE 2006c and 2006d, respectively) were reviewed for information related to the proposed project area drainages. Regulation No. 93 is the State’s Section 303(d) list of water-quality-limited segments requiring

Total Maximum Daily Loads (TMDLs). The 2006 303(d) list of segments needing development of TMDLs includes two segments within the White River - segment 9b, White River tributaries North and South Forks to Piceance Creek, specifically the Flag Creek portion (for impairment from selenium with a low priority for TMDL development) and segment 22, tributaries to the White River, Douglas Creek to the Colorado/Utah boarder, specifically West Evacuation Wash, and Douglas Creek (sediment impairments). Regulation 94 is the State's list of water bodies identified for monitoring and evaluation, to assess water quality and determine if a need for TMDLs exists. The list includes two White River segments that are potentially impaired – 9b (Flag Creek) and 22 (Soldier Creek). Stream segments 9a, 12 and 13a were not listed.

All of the proposed erosion control structures are situated in ephemeral tributaries to the White River, which is a major sub-basin of the Colorado River System. High runoff generally occurs from mid-March through mid-June and is caused primarily by melting of the higher elevation snowpack. Transitional months are usually March and July. Early season runoff is generally from lower elevation snowmelt and may provide a separate and lower discharge peak than the main peak in the hydrograph, which usually occurs in late May and early June.

Water from the higher mountain runoff contains lower concentrations of salts with calcium bicarbonate predominating. As water moves through the lower reaches of the system, the major constituents typically change from calcium bicarbonate to calcium sulfate, sodium sulfate, and sodium chloride. This shift is influenced by factors such as (a) a change in the salinity of the alluvial material that water contacts, (b) the chemical makeup of soils and geologic formations contributing surface runoff and groundwater, and (c) the relative cation-anion exchange activity between salt producing ions. Sodium and chloride are the most active ions and tend to replace or exchange with other elements in solution.

Environmental Consequences of the Proposed Action: Implementation of the planned pits and gully plugs will temporarily aid in watershed stabilization and salinity reduction. Short term objectives will be a sustained yield of cleaner water, a decrease in soil loss, and an increase in vegetation cover that protects a watershed. However, long term maintenance of the sites will be necessary to sustain watershed health. Therefore, the proposed erosion control structures will have short term (less than 20 years) impacts beneficial to water quality by reducing salt loads and sediment transport into the White River and subsequently into Kenney Reservoir.

Without proper maintenance, the proposed sediment retention structures will have long term impacts detrimental to watershed health. Creating pits and gully plugs will cause a change in base level at the location which if not properly maintained will be the origin of head cut greater than or equal to the size of the original cut. This will result in accelerated erosion rates above the structure as the head cut migrates up gradient.

Channel morphology below these earthen dams will develop to accommodate post construction flow levels which will result in channel characteristics misrepresentative of drainage area (“undersized channels”). “Undersized channels” will be unable to contain typical flows for the affected drainage area if structures become non-functional or are abandoned. Long term increases in sediment load to the White River will result following abandonment/non-functional sediment retention structures.

Environmental Consequences of the No Action Alternative: Short term impacts affecting the existing environment would continue for some time. However, natural development of channel morphology will result in long term stabilization of channel bottom and banks. With natural development of stream channel morphology the affected systems will have greater potential to obtain a balanced between sediment supply and flow.

Mitigation: Strong commitment to monitoring and long term maintenance is essential to sustain functional structures and maintain current watershed health. Construction of retention structures should take place high in drainage basins to limit impacts of “undersized channel” development. Retention structures will be promptly revegetated as outlined in the proposed actions.

Finding on the Public Land Health Standard for water quality: With suggested mitigation, water quality will meet standards set by the state.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: The majority of sites associated with the proposed action are located in the upland tributaries of Wray Gulch, which is an immediate branch of the White River (~1 mile). No structures being proposed are located within the immediate drainage of Wray Gulch, as they are located in secondary and upland tributaries.

No substantial wetlands and/or riparian zones are located within the direct vicinity of the project area, as the only water sources within the main drainage and upland tributaries are ephemeral, resulting from overland flow events from rain and/or snow melt.

Of the 51 existing check dams proposed for cleaning, 6 sites contain cattails, 2 dams have willows, and 1 reservoir has a cottonwood. Therefore, 9 of the 51 existing dams have a form of riparian plant species associated with the past construction of the check dams that created saturation zones required for seed establishment. Overall, these 9 sites are fragmented, contain minimal quantities of riparian communities, sustain a negligible viability for riparian plants, and are artificial in nature due to their association with the check dams.

The nearby White River (~1 mile) does support a robust riparian community; however the river is located on privately owned lands within the vicinity of the proposed action and is not directly connected to the proposed action.

Phorney Retention Dam is located approximately 1/16 of a mile in the lower watershed of the proposed locality. Phonery Retention Dam is spring fed and supports a robust riparian community (e.g. freemont cottonwoods, cattails, bull rushes, sedges, etc.) along the immediate shoreline of the reservoir and was recently cleaned (2005) of excess sediment.

Environmental Consequences of the Proposed Action: None, as no viable wetlands and/or riparian zones are located within the direct vicinity of the project area nor would any be impacted by development of this proposal affect wetlands and/or riparian zones.

These proposed erosion control structures will only catch overland flow events from rain and snow melt, since no perennial or intermittent water exists within the upland tributaries within the project's boundary.

The small quantities of riparian plants within the 9 existing check dams would be removed due to the cleaning of sediment. This action would not have any direct correlation to the subsistence of riparian communities within the project area as the 9 communities are fragmented and nonviable in nature. An opportunity would occur for the re-establishment of these nominal riparian communities after the removal of excessive sediment that would allow for future water catchment and sediment accumulation.

The proposed action will have no impact on riparian zones associated with private lands along the White River. This area is separated from the project area and has no direct correlation with the proposed level of disturbance.

Phorney Retention Dam's associated riparian community will not be negatively impacted from this project as no work will occur directly in this area. The proposal will retain upland sediment of this reservoir, thereby aiding in the longevity of the dam that assists riparian accumulation along the shoreline.

The project would reduce the amount of headcut advancement within these small upland drainages. With the reduction of headcutting, an opportunity would exist for the natural creation of a native grass swale community upslope of the constructed erosion control structures. However, a lack of adequate water would preclude these systems from developing into a viable riparian system.

Environmental Consequences of the No Action Alternative: None; not constructing these structures would have no impact on any downstream wetland, riparian habitat, floodplain, and/or alluvial valleys.

Mitigation: None

Finding on the Public Land Health Standard for riparian systems: The proposed action would not affect Public Land Health Standard for riparian systems due to the fact that no viable and functioning riparian systems exist within the scope of the projects area.

CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:

No ACECs, flood plains, prime and unique farmlands, Wilderness, or Wild and Scenic Rivers exist within the area affected by the proposed action. There are also no Native American religious or environmental justice concerns associated with the proposed action.

NON-CRITICAL ELEMENTS

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

SOILS (includes a finding on Standard 1)

Affected Environment: Proposed erosion control structures #1-12 and #26-39 occur in a Moyerson Stony Clay Loam, 15-65% Slopes, which are shallow, well drained soils. This soil type has a substantial clay content (~ 17 inches), slow permeability, rapid runoff, and high water erosion hazard.

Proposed erosion control structures #40-60 occur in a Yamac Loam, 2-15% Slopes, which are deep, well drained soils in eolian and alluvial materials. These soils have moderate permeability, moderate to high water holding capacity, medium runoff, and slight to moderate water erosion hazard.

Proposed erosion control structures #13-25 occur in a Patent Loam, 8-15% Slopes, which are deep, well drained soils on fans and toe slopes formed in alluvium, colluvium, and thin eolian material. Patent Loams have moderate permeability, moderate water holding capacity, medium runoff, and high water erosion potential.

Proposed erosion control structures #61-67 occur in an Arbor Clay Loam, 5-30% Slopes, which are moderately deep, well drained, and derived from dominantly clayey shale. These soils have slow to very slow permeability, low water capacity, rapid runoff, and high water erosion hazard.

All of these soils are highly erosive in nature and have a high salt/clay content. Active headcutting is common with the locality of the proposed action, thus necessitating the proposal. Sediment yields from the project area are estimated at 5 to 12 tons per acre with some areas producing as much as 20 tons per acre.

Environmental Consequences of the Proposed Action: The proposed erosion control structures would dissipate and capture overland flow of water resulting from rain and snow melt, thus reducing the erosive action of flowing water. Active headcutting of many upland drainages would be reduced as a result of the proposed action. Therefore, a greater amount of soils would be retained within the uplands through reduced erosion and not transported to downstream sources.

It is estimated that the proposed sediment retention structures would retain sediment produced from 850 acres. This would result in an estimated 4,250 to 10,200 tons of sediment retained in the uplands annually and not transported into the tributaries to the White River and eventually into Kenny Reservoir. In addition, the salt/salinity content within the sediment loads would be

retained in the uplands and not transported into the White River. The White River is a part of the Colorado River System which is highly impacted from salt/salinity loads within the river system.

Environmental Consequences of the No Action Alternative: Without the proposed sediment retention structures, up to an estimated 10,200 tons of sediment could continue to be transported annually into waterways leading to Kenny Reservoir. Headcut advancement would continue up the drainage bottoms of the proposal area until a non-permeable soil layer is intersected by the advancing wash. This progression of headcuts would increase the extent and size of undesirable incised washes. Also, the project area would continue to produce salt/salinity loads that would make their way into the White River and eventually into the Colorado River system

Mitigation: None

Finding on the Public Land Health Standard for upland soils: The proposed action would help in meeting and maintaining Colorado Public Land Health Standard for soils in those localities treated within the project area. This Standard relates to upland soil stability and their relation to plant communities within the landscape. Currently, the upland soil standard is not being met with the proposed project area due to active head cutting. The proposal would help in meeting this soil Standard because headcut advancements would be reduced through construction of sediment catchments. The no action alternative would result in a situation in which the Colorado Public Land Health Standard for upland soils may not be met due to headcuts causing incised drainages.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Ecological sites associated with the proposed action are principally clayey slopes, rolling loam, and clayey foothills.

Vegetation related to the proposed action is primarily a Wyoming sagebrush (*Artemisia tridentata ssp. wyomingensis*) community whose understory is dominated by western wheatgrass (*Agropyron smithii*), Sandberg bluegrass (*Poa secunda*), green needle-grass (*Stipa viridula*), and squirreltail (*Sitanion hystrix*). Cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicus*), both invasive and alien grasses, are found throughout the proposal area.

Also located in the vicinity of the proposed action is a salt tolerant vegetation community dominated by Gardner saltbush (*Atriplex gardneri*), shadscale (*Atriplex confertifolia*), winter fat (*Ceratoides lanata*), and greasewood (*Sarcobatus vermiculatus*). These shrubs typically have an understory consisting of Salina wildrye (*Elymus salinus*), western wheatgrass, and squirreltail. Cheatgrass and Japanese brome, both invasive and alien grasses, are also found throughout this plant community.

Proposed structures are typically located in upland tributaries of the main drainages that provide opportunities for the development of grass swale communities in the small drainage bottoms.

Western wheatgrass and green needlegrass are the dominate vegetation types located within these grass swales.

Environmental Consequences of the Proposed Action: The typical plant community that would be impacted by this action over the long term would be the grassed swale communities within the secondary tributaries of the main drainages. Other plant communities would be impacted by traversing equipment; however those impacts are expected to be minimal and short term because of the limited nature of the impact. As shown from previous cross-country dozer travel within this locality in recent years, there are little long-term impacts or evidence of the previous dozer track imprints.

The erosion control structures would prevent the progression of headcuts into the productive grassed swales. Without the proposed structures, these swale areas would continue to decline in productivity and acreage as headcuts continue there advancement into the swales. This headcutting action would limit the availability of these rangelands to provide adequate plant production, and transforming these grassed swales into incised drainages dominated by cheatgrass. In addition to preventing loss of grassed swales, silt trapped in the erosion control structures will create sites suitable for development of future grassed swales.

Approximately 1.6 acres of vegetation communities spread over 16 sites will be disturbed and removed from production. About 8.5 acres will be re-disturbed in connection with cleaning of sediment from 51 existing erosion control structures. These disturbed areas will be reclaimed using the seed mix outlined in the proposed action, thereby allowing for the continued production outside of the water holding capacity zone of the check dam.

Environmental Consequences of the No Action Alternative: Headcut advancement would continue to destroy the grassed swale plant communities within the secondary drainage bottoms. Also, the no action alternative would result in a situation in which the Colorado Public Land Health Standard for Plant Communities may not be met, because of the transformation of the grassed swale plant communities into incised washes.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The proposed action would help in achieving and maintaining the Public Land Health Standard for plant communities for those locations treated within the project area. This Standard relates to the health and productivity of the landscape's plant and animal communities, and manages them at levels within the habitat's ecological potential. Helping to reach this standard would be done by restricting the advancement of headcuts up the drainage bottoms, thus limiting the reduction of the natural extent of grass swale plant communities that lay within the path of advancing headcuts. Areas dominated by cheatgrass, an annual, invasive, and non-native species, are not meeting Public Land Health Standard for plant communities and would not change under the proposal and/or No Action Alternative.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: There are no developed aquatic habitats or communities directly associated with this action.

Environmental Consequences of the Proposed Action: The proposed action would have no conceivable influence on aquatic wildlife or associated systems.

Environmental Consequences of the No Action Alternative: The no action alternative would have no conceivable influence on aquatic wildlife or associated systems.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): The proposed action would not affect Public Land Health Standard for riparian systems as no aquatic wildlife or habitats are located within the project area.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The project area is characterized by low-elevation big sagebrush and salt-desert shrublands. All retention structures are located within big game severe winter range, a specialized component of winter range that periodically supports virtually all an area's deer/elk under the most severe winter conditions (i.e., extreme cold and heavy snowpack). These ranges typically sustain big game use from December through April.

Immature pinyon-juniper are located on the slopes surrounding the project area, however, these younger stands typically do not provide adequate nesting substrate for woodland raptors.

Small mammal populations are poorly documented, however, the 14 or so species that are likely to occur in this area display broad ecological tolerance and are widely distributed throughout the Great Basin and/or Rocky Mountain regions. No narrowly distributed or highly specialized species or subspecific populations are known to inhabit the area.

Environmental Consequences of the Proposed Action: Construction of all 64 structures as proposed would involve about 10 acres of surface disturbance (1.6 acres new disturbance, 8.5 acres redisturbance), and would constitute an imperceptibly small, widely dispersed, and temporary reduction in the woody forage and cover base for big game and nongame wildlife. This action represents a very localized, slowly progressing, and predictable form of disturbance that would involve little, if any, disruption of big game and nongame seasonal use activities. Construction would not occur during those periods when resident wildlife is most susceptible to displacement and avoidance responses (i.e., seasonal reproductive activities and late winter/early spring period).

The proposed project would not involve the expansion or redevelopment of the local road system. Existing roads and trails would be used as much as practical. Experience from previous projects has shown that cross-country walking of the dozer leaves little in the way of a residual track and the dozer's track span is not amenable to further use by conventional wheeled vehicles.

Brief water retention and channel aggradations attributable to these structures would, in the matter of several years, create herbaceous swales that produce and retain herbaceous cover and succulent forb forage late into the summer. Increased availability of upland water may occasionally intensify spring grazing use by livestock and elk in these locales, but usable water storage will likely be brief, such that the overall effect on herbaceous cover and forage conditions for big game would be slight. These series of structures would be expected to stabilize actively eroding gullies and eventually expand the lateral extent of swale habitat within the greater sagebrush/saltbush matrix. These swales would be expected enhance cover, forage substrate and foodstuffs derived from herbaceous growth across the entire spectrum of resident game and non-game fauna.

Environmental Consequences of the No Action Alternative: The no action alternative would forego a cooperative effort to maintain and/or reestablish herbaceous swale components within native shrub habitats to the benefit of resident big game. Left unattended, and in the long term, a similar herbaceous community might be expected to develop in a mature channel incise. However, the utility of herbaceous forage and cover available in these circumstances would be effectively lost since big game may be behaviorally constrained from accessing deep and narrow incises. It is also unlikely that the potential lateral expression of moisture in an incise would be as extensive as a swale developed closer to the original landform.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The overall project area meets the public land health standard for animal communities, although incised bottomland vegetation communities tend to be represented excessively by introduced annuals (e.g., cheatgrass, purple mustard). Although these sites, in and of themselves, cannot be considered meeting the definition of the land health standard, the vast majority of the shrublands comprising this landscape retain character sufficient to support viable populations of resident nongame species, albeit at population densities somewhat reduced from potential. In their current state, these bottomland sites would remain in a historically imposed annual disclimax and would be incapable of supporting comparable abundance or diversity of nongame wildlife relative to well developed native bunchgrass communities.

The proposed action would contribute broadly to the long term restoration of soil stability and ephemeral channel processes in these bottomland situations and thereby aid in better meeting land health objectives by promoting conditions amenable to the redevelopment of bunchgrass communities that would support an animal community (particularly small mammals) that more closely resembled animal composition and density more appropriate to the potential of the site.

OTHER NON-CRITICAL ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Access and Transportation		X	
Cadastral Survey	X		
Fire Management	X		
Forest Management	X		
Geology and Minerals	X		
Hydrology/Water Rights			X--See Water Quality
Law Enforcement	X		
Noise	X		
Paleontology		X	
Rangeland Management			X
Realty Authorizations		X	
Recreation			X
Socio-Economics	X		
Visual Resources			X
Wild Horses	X		

RANGELAND MANAGEMENT:

Affected Environment: The project area is completely located in the Little Toms Draw allotment (06603). This allotment is operated by Morapos Sheep Company (0501466) whose grazing permit can authorize sheep use from 11/1-11/30 and 4/20-06/15. Morapos Sheep typically utilizes this allotment for lambing purposes during the spring period. Utilization rates of desired vegetation communities by sheep are typically high during this lambing period due to a lack of sufficient forage, mediocre distribution of livestock, and limited water availability.

Environmental Consequences of the Proposed Action: The typical plant community that would be impacted by this action over the long term would be the grassed swale communities, as the proposed erosion control structures are typically located in these areas. Other plant communities would be impacted by traversing equipment; however those impacts are expected to be minimal and short term because of the limited nature of the impact. As shown from previous cross-country dozer travel within this locality in recent years, there are little long-term impacts or evidence of the previous dozer track imprints.

The erosion control structures would prevent the progression of headcuts into the highly productive grassed swales, which provide forage value for grazers. In addition to preventing the loss of grassed swales, silt trapped in the erosion control structures will create sites suitable for development of future grassed swales, which would result in a slight increase in forage availability for grazing animals.

The structures will also provide livestock watering sites, which will achieve greater distribution of livestock. Therefore, increased distribution of livestock will aid in a more even utilization pattern with use of the uplands located near the proposed structures. This would be beneficial in that less intensive use by authorized livestock, particularly during lambing, would occur around existing water localities through greater distribution. However, erosion control structures also provide an opportunity for livestock entrapment in water and/or mud (i.e. sediment accumulation). This situation of livestock entrapment is most apparent with young lambs.

Environmental Consequences of the No Action Alternative: Headcut advancement would continue to destroy grassed swales within drainage bottoms and result in a long term continuing loss of forage available to grazing animals. Forage losses expected under this alternative are likely to cause increased grazing use on available upland forage sources. An increase in grazing use of upland areas would reduce vegetative cover on these areas, thus increasing potential runoff into the grassed waterways and resulting in the hastened loss of forage and vegetative ground cover.

Also, without the added benefit of increase water distribution provided by the proposed action, livestock would continue to utilize existing water sources, thus lessening distribution and concentrating utilization levels by livestock near existing water. Yet, without the erosion control structures there would be no increased danger of livestock entrapment within the water and/or mud.

Mitigation: None

REALTY AUTHORIZATIONS:

Affected Environment: There are numerous buried right-of-way facilities (pipelines, etc.) in the project area. The only section that is free of right-of-way encumbrances is section 23 of T. 2 N., R. 97 W.

Environmental Consequences of the Proposed Action: None

Environmental Consequences of the No Action Alternative: None

Mitigation: 1. The Colorado One Call procedure must be implemented before any surface disturbing activities take place.

RECREATION:

Affected Environment: The proposed action occurs within the White River Extensive Recreation Management area (ERMA). The ERMA will is managed custodially to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use. Location is adjacent to the only operating landfill in Rio Blanco County.

The project area has been most resembles a Recreation Opportunity Spectrum (ROS) class of Semi-Primitive Motorized (SPM). SPM physical and social recreation setting is typically characterized by a natural appearing environment with few administrative controls, low interaction between users but evidence of other users may be present. SPM recreation experience is characterized by a high probability of isolation from the sights and sounds of humans that offers an environment that offers challenge and risk.

Environmental Consequences of the Proposed Action: The general vicinity around Wray Gulch is used infrequently during various times of the year for big game hunting. If construction of proposed action occurs during the period of October through November, some recreational hunting activities may be interrupted. After construction has ceased there will be no impact on recreational resources.

Environmental Consequences of the No Action Alternative: None.

Mitigation: To avoid impacts to recreational hunters, the months of October and November could be precluded from construction dates.

VISUAL RESOURCES:

Affected Environment: The proposed action is within a VRM class III area. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Environmental Consequences of the Proposed Action: The proposed action is small in scale relative to the surrounding landscape and not visible from any Key Observation Point (Colorado State Highway 64); therefore, any modifications will be unseen to the casual observer, and VRM III objectives will be met. Furthermore, any disturbed vegetation will return making the action virtually unnoticeable within a period of a few years.

Environmental Consequences of the No Action Alternative: No impact on visual resources would be expected.

Mitigation: Remove as little vegetation as possible during construction.

CUMULATIVE IMPACTS SUMMARY: This project, in concert with similar efforts being undertaken, would aid in extending the useful life of Kenny Reservoir, prevent/reduce the advancement of headcuts within treated drainages, as well as prevent high salt loads from eventually making their way into the Colorado River system.

In 2001, 53 sediment retention structures were constructed/re-constructed in the Divide Creek and Box Elder Creek drainages, and retained an estimated 1,250 to 3,000 tons of sediment in uplands annually. In 2002, 68 structures were constructed/re-constructed in the Coal Reef/Coal Creek area, which held an estimated 5,750 to 13,800 tons of sediment. In 2003, 65 structures were constructed in the Coal Reef area, south of the Wolf Creek drainage, and retained an estimated 5,375 to 12,900 tons of sediment. In 2004, 70 structures were constructed/re-constructed in the Hall Draw and Box Elder drainages that retained an estimated 6,300 to 15,120 tons of sediment. In 2005, 67 structures were constructed/re-constructed in the Smizer Gulch drainage and retained an estimated 5,900 to 14,160 tons of sediment. All of these drainages contribute to sediment and salt runoff into the White River (Kenny Reservoir), which is a tributary to the Colorado River.

Thus, with the addition of the proposed action in this environmental assessment, an estimated 28,825 to 69,180 tons of sediment will/have be retained in the uplands per year and prevented from entering the White River and Kenny Reservoir.

Other impacts, such as removal of vegetation and damage from cross-country travel by the construction equipment, are not cumulative because these impacts are temporary in nature, as those from previous projects no longer exist in a measurable degree.

REFERENCES CITED:

Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Commission (WQCC), 2005a. Regulation No. 37 Classifications and Numeric Standards for Lower Colorado River Basin. Amended December 12, 2005 and Effective March 2, 2006.

CDPHE-WQCC, 2006b. "Status of Water Quality in Colorado – 2006, The Update to the 2002 and 2004 305(b) Report," April 2006.

CDPHE-WQCC, 2006c. "Regulation No. 93, 2006 Section 303(d) List Water-Quality-Limited Segments Requiring TMDLs," effective April 30.

CDPHE-WQCC, 2006d. "Regulation No. 94, Colorado's Monitoring and Evaluation List," effective April 30.

PERSONS / AGENCIES CONSULTED: Consultation has been conducted with Rio Blanco Water Conservancy District, Rio Blanco County, Terry Mobley, and Morapos Sheep.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Nate Dieterich	Hydrologist	Air Quality
Tamara Meagley	Natural Resource Specialist	Areas of Critical Environmental Concern

Name	Title	Area of Responsibility
Tamara Meagley	Natural Resource Specialist	Threatened and Endangered Plant Species
Michael Selle	Archaeologist	Cultural Resources Paleontological Resources
Jed Carling	Rangeland Specialist	Invasive, Non-Native Species
Lisa Belmonte	Wildlife Biologist	Migratory Birds
Lisa Belmonte	Wildlife Biologist	Threatened, Endangered and Sensitive Animal Species, Wildlife
Melissa J. Kindall	Hazmat Collateral; Range Technician	Wastes, Hazardous or Solid; Wild Horses
Nate Dieterich	Hydrologist	Water Quality, Surface and Ground Hydrology and Water Rights
Jed Carling	Rangeland Specialist	Wetlands and Riparian Zones
Chris Ham	Outdoor Recreation Planner	Wilderness
Jed Carling	Rangeland Specialist	Soils
Jed Carling	Rangeland Specialist	Vegetation
Lisa Belmonte	Wildlife Biologist	Wildlife Terrestrial and Aquatic
Chris Ham	Outdoor Recreation Planner	Access and Transportation
Ken Holsinger	Natural Resource Specialist	Fire Management
Robert Fowler	Forester	Forest Management
Paul Daggett	Mining Engineer	Geology and Minerals
Jed Carling	Rangeland Specialist	Rangeland Management
Penny Brown		Realty Authorizations
Chris Ham	Outdoor Recreation Planner	Recreation
Chris Ham	Outdoor Recreation Planner	Visual Resources

Finding of No Significant Impact/Decision Record (FONSI/DR)

CO-110-2006-191-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analysis of the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to approve the construction and /or maintenance of the 67 erosion control structures, as described in the proposed action, with the mitigation measures listed below.

MITIGATION MEASURES:

1. To minimize production of fugitive particulate matter (fugitive dust) from associated access roads, vehicle speeds must not exceed 15 mph *or* dust plume must not be visible at appropriate designated speeds for road design. Earth moving or excavation activities will be suspended when wind speeds exceed a sustained velocity of 20 miles per hour. The top and downstream portions of retention structures will be revegetated with a BLM approved seed mixture.
2. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:
 - whether the materials appear eligible for the National Register of Historic Places;
 - the mitigation measures the operator will likely have to undertake before the identified area can be used for grazing activities again and,Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.
3. Clean out and repair of the historic structure may not proceed until all relevant research and consultation with the Colorado SHPO and any required mitigation has been completed.

4. The 5 sites identified with tamarisk plants shall be cleaned last, therefore eliminating the potential spread of tamarisks seed to adjacent sites free of tamarisks.
5. The applicant shall be required to collect and properly dispose of any solid wastes generated by the proposed actions.
6. Strong commitment to monitoring and long term maintenance is essential to sustain functional structures and maintain current watershed health. Construction of retention structures should take place high in drainage basins to limit impacts of "undersized channel" development. Retention structures will be promptly revegetated as outlined in the proposed actions.
7. The Colorado One Call procedure must be implemented before any surface disturbing activities take place.
8. To avoid impacts to recreational hunters, the months of October and November could be precluded from construction dates.
9. Remove as little vegetation as possible during construction.

COMPLIANCE/MONITORING: An inspection of current and past completed projects will be completed by the BLM's Rangeland staff that is responsible for the grazing allotments and would continue on a regular basis.

NAME OF PREPARER: Jed Carling (Rangeland Management Specialist)

NAME OF ENVIRONMENTAL COORDINATOR: Caroline Hollowed

SIGNATURE OF AUTHORIZED OFFICIAL:

 Actin
Field Manager

DATE SIGNED:

August 23, 2006

ATTACHMENTS:

- Figure 1: Map of Wray Gulch Erosion Control Structures
- Table 1: Informational Table of Wray Gulch Erosion Control Structures

Figure 1: Map of Wray Gulch Erosion Control Structures

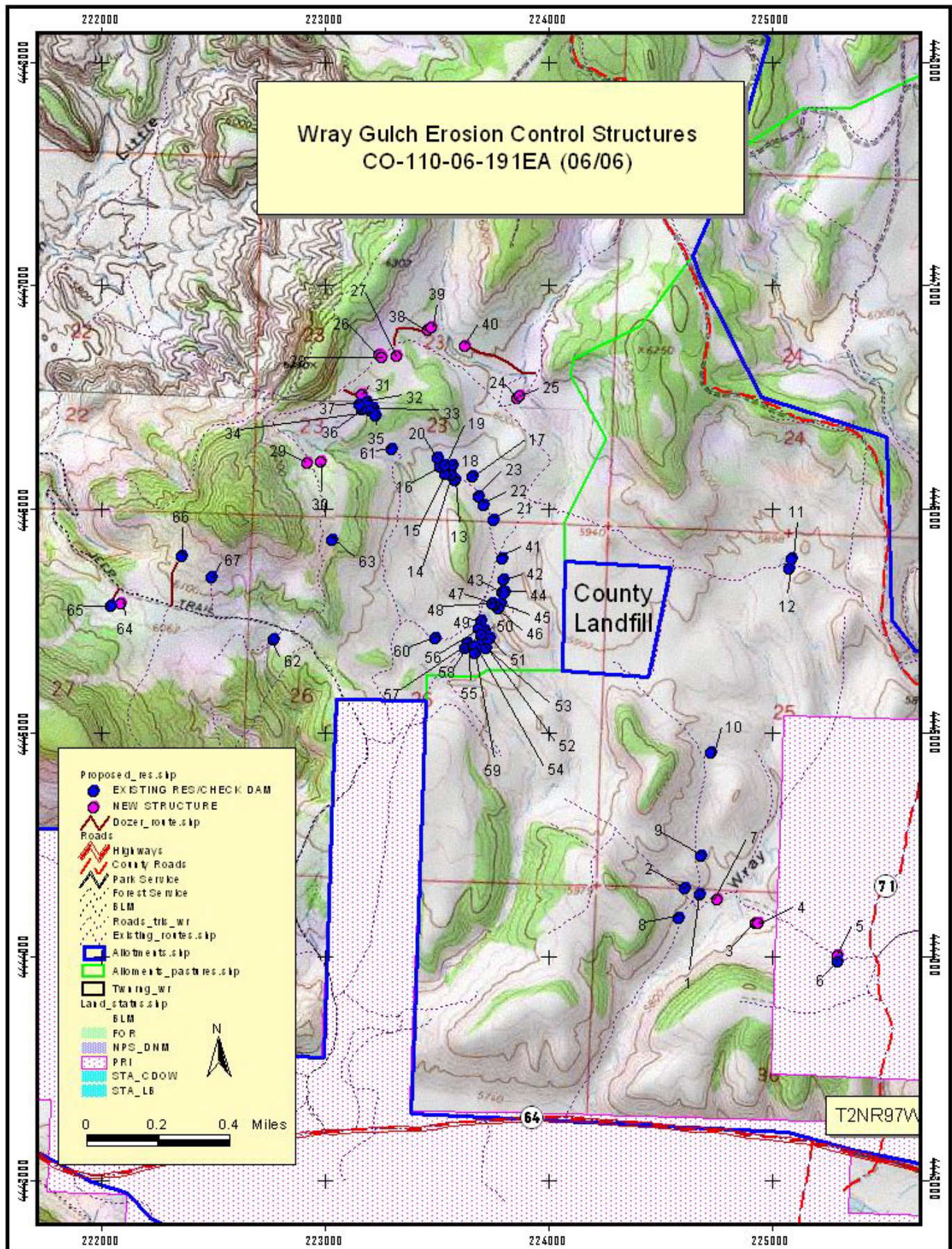


Table 1: Informational Table of Wray Gulch Erosion Control Structures

Wray Gulch Erosion Control Structures CO-110-06-191-EA			
#	SIZE	COMMENT	EXISTING VS. NEW CONSTRUCTION
1	Small		EXISTING RES/CHECK DAM
2	Small		EXISTING RES/CHECK DAM
3	Medium	HEADCUT, 4'	NEW STRUCTURE
4	Medium	HEADCUT, 3'	NEW STRUCTURE
5	Medium	HEADCUT, 3'	NEW STRUCTURE
6	Medium		EXISTING RES/CHECK DAM
7	Small	HEADCUT, 2', CATTAILS	NEW STRUCTURE
8	Medium	CATTAILS	EXISTING RES/CHECK DAM
9	Small		EXISTING RES/CHECK DAM
10	Medium	CATTAILS	EXISTING RES/CHECK DAM
11	Large	CATTAILS, 0564, '64	EXISTING RES/CHECK DAM
12	Medium	CCC, CATTAILS, PIPED	EXISTING RES/CHECK DAM
13	Large	COTTONWOOD, 4009, '79	EXISTING RES/CHECK DAM
14	Small		EXISTING RES/CHECK DAM
15	Small		EXISTING RES/CHECK DAM
16	Small		EXISTING RES/CHECK DAM
17	Small		EXISTING RES/CHECK DAM
18	Small		EXISTING RES/CHECK DAM
19	Small		EXISTING RES/CHECK DAM
20	Small		EXISTING RES/CHECK DAM
21	Small		EXISTING RES/CHECK DAM
22	Medium		EXISTING RES/CHECK DAM
23	Small		EXISTING RES/CHECK DAM
24	Medium	HEADCUT, 1'	NEW STRUCTURE
25	Small	HEADCUT, 1'	NEW STRUCTURE
26	Medium	HEADCUT, 1'	NEW STRUCTURE
27	Small	HEADCUT, 1'	NEW STRUCTURE
28	Small	HEADCUT, 2'	NEW STRUCTURE
29	Large	HEADCUT, 5'	NEW STRUCTURE
30	Medium	HEADCUT, 1'	NEW STRUCTURE
31	Small	HEADCUT, 2'	NEW STRUCTURE
32	Small	PIPED	EXISTING RES/CHECK DAM
33	Medium	WILLOWS	EXISTING RES/CHECK DAM
34	Small		EXISTING RES/CHECK DAM
35	Small		EXISTING RES/CHECK DAM
36	Small		EXISTING RES/CHECK DAM
37	Small	TAMARISK	EXISTING RES/CHECK DAM
38	Large	HEADCUT, 8'	NEW STRUCTURE
39	Large	HEADCUT, 10'	NEW STRUCTURE
40	Large	HEADCUT, 4'	NEW STRUCTURE
41	Small		EXISTING RES/CHECK DAM
42	Small		EXISTING RES/CHECK DAM
43	Small	TAMARISK, PIPED	EXISTING RES/CHECK DAM

Wray Gulch Erosion Control Structures CO-110-06-191-EA			
#	SIZE	COMMENT	EXISTING VS. NEW CONSTRUCTION
44	Small	TAMARISK	EXISTING RES/CHECK DAM
45	Small		EXISTING RES/CHECK DAM
46	Medium	PIPED	EXISTING RES/CHECK DAM
47	Small		EXISTING RES/CHECK DAM
48	Small	WASHED OUT	EXISTING RES/CHECK DAM
49	Small		EXISTING RES/CHECK DAM
50	Small	WASHED OUT	EXISTING RES/CHECK DAM
51	Medium		EXISTING RES/CHECK DAM
52	Small		EXISTING RES/CHECK DAM
53	Medium	WASHED OUT	EXISTING RES/CHECK DAM
54	Small	RUSHES	EXISTING RES/CHECK DAM
55	Small		EXISTING RES/CHECK DAM
56	Small		EXISTING RES/CHECK DAM
57	Small		EXISTING RES/CHECK DAM
58	Small	WILLOWS	EXISTING RES/CHECK DAM
59	Small		EXISTING RES/CHECK DAM
60	Small		EXISTING RES/CHECK DAM
61	Medium	WASHED OUT	EXISTING RES/CHECK DAM
62	Large	CATTAILS	EXISTING RES/CHECK DAM
63	Medium		EXISTING RES/CHECK DAM
64	Large	HEADCUT, 3'	NEW STRUCTURE
65	Medium	LIMITED CLEANING	EXISTING RES/CHECK DAM
66	Medium	TAMARISK	EXISTING RES/CHECK DAM
67	Medium	TAMARISK	EXISTING RES/CHECK DAM

Location of Proposed Action CO-110-2006-191-EA

